4380

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

11—6618

State: SW. Alaska

DESCRIPTIVE REPORT.

Hydrog. Sheet No. 4380

LOCALITY:

Alaska Peninsula

Entrance to Pavlof Bay

1924

CHIEF OF PARTY:

R.R. Lukens

4380

DESCRIPTIVE REPORT.

Hydrographic Sheet "G"

PAVLOF BAY ENTRANCE ---

S3W, ALASKA.

Str. PIONEER 1;40,000 R.R.Lukens,
Comdg.

1924.

LIMITS This sheet embraces the entrance to Pavlof Bay, and covers the area between Arch Point, Cape Tolstoi, and Ukolonoi Island. It extends to a line 5 miles north of Cape Tolstoi.

CONTROL The survey is controlled by a scheme of triangulation based on the old stations TOLSTOI - UKOLONOI 11 - KNOB. Three stations on Ukolonoi Id. were determined from the lines TOLSTOI ▲ FLAT ▲ PAV. The triangles on these points did not check well, but the strongest triangle was used. Before the topography of Ukolonoi Id. is taken up, these stations should be redetermined using a stronger triangle. BIG and KOL are only white wash marks while UKE is a tripod signal.

METHODS With the exception of a small area near Flat Island, all the hyd hydrography was done from the ship, using the Rude type pressure tube. The area around Flat and Lump was considered dangerous for the ship, and was done by one of the motor sailers.

GENERAL ASPECT The western shore of Pavlof Bay, from Arch Pt. to the Northward is low and flat and largely composed of cinders and ashes from Pavlof Volcano. There is but little vegetation, and on a dry windy day, the area back of △Bluff has the appearance of a desert. Back of the shore line the ground rises gradually to the three main peaks of Pavlof Volcano. The eastern shore from Cape Tolstoi north is bold and mountainous with rocky shores. Cape Tolstoi is bold and precipitous with several pinnacle rocks at its foot

BROKEN GROUND There is an area of very irregular bottom in the vicinity of Flat and Lump Islands. All these spots were sounded over carefully, and 12 to 14 fathoms, hard rocky bottom, were the least depths found. Until they are dragged, shipping should be warned to keep clear of them.

Found 1¼fms H-6594

ANCHORAGES Good protection from easterly weather, with excellent holding ground can be had just north of Cape Tolstoi. Anchorage should be made in about 15 fathoms, to avoid getting too near the beach

Just east of △ Dune there is a muddy flat of about one mile in extent making off shore where a good anchorage in 10 to 15 fathoms, sticky mud bottom may be had. It is recommended that the tripod signal Dune be shown on the chart as an aid in marking this anchorage. The tripod should last several years.

TIDAL DATA The King Cove gauge was used for the reduction of soundings on this sheet. It was found later that there was practically no difference in time and range between King Cove and Settlement Point.

ARCH POINT is a well known point that has been described in previous surveys. It is marked by a blinker light, and a large white day beacon. Both these aids were located by triangulation.

BLACK ROCK is the small bare rock about 3½ miles S. of Black Point. It is about 15 ft. in heigth, and has deep water close to all around. It is black in color and shows up well. There is deep clear water between it and the mainland.

FLAT ISLAND is the large flat topped island in mid entrance to the bay. It is 62 feet in heighth and has a precipitous shore line. There are extensive reefs both to the north and south of Flat Island, and a small reef just to the west of it.

LUMP ISLAND is a rocky islet about 45 feet in height 2 miles east of Black Pt. There is a smaller detached rock about 20 ft in height just to the S.E. of the main rock. They are connected by a reef at low tide. Deep water surrounds the two islets.

BLACK POINT is the low and rather indefinite point that marks the western entrance to Pavlof Bay. It is low, devoid of gegetation, and is composed of cinders and ashes. Behind Black Point, there is a large butte shaped mass of cinders and ashes that shows up prominently when passing Pavlof Bay. This was located on the topographic sheet of this region.

NEW NAMES

BLACK ROCK The name is descriptive and used locally.

BLACK POINT Descriptive and used locally

FLAT ID. Descriptive. There is no local name for this island.

LUMP ID Descriptive. There is no local name.

DESCREPENCY WITH 1911 WORK In the vicinity of Arch Pt. where the survey joined the work of 1911, there was a constant and nearly uniform descrepency in depths. Our soundings were about 10 fathoms deeper than the old work. Pavlof Volcano has been in violent eruption several times in late years, and there have been several severe earth quakes in this region, so it is just possible that there have been changes in depths.

Respectfully submitted,

R.R. Lukens

Chief of Party.

Pavlof Bay Entrance.

Date	Letter	Vol.	Positions.	Sndgs.	Miles Statute	Vessel
July 24, 1924	A	1	45	105	21.0	Ship
July 26,	B	1	68	173	39.0	Ship
July 28,	C	1	65	172	38.0	Ship
July 29,	D	2	70	156	38.4	Ship
July 30	E	2	90	245	53.0	Ship
July 31,	F	3	91	221	49.7	Ship
July 31,	a	1	94	129	24.0	M. S. #1
August 1,	G	4	75	186	28.5	Ship
August 1,	b	1	42	46	8.0	M.S. #1
August 7,	H	4	61	144	27.9	Ship
August 8,	J	5	31	82	14.5	Ship
August 12,	K	5	49	105	19.0	Ship
September 9	L	5&6	103	262	48.6	Ship
September 10	M	6	86	233	44.0	Ship
September 12	N	6	11	19	2.2	Ship
September 16	P	7	51	110	12.8	Ship
September 26	Q	7	42	82	5.7	Ship
			1074	2470	474;3.	

[redacted]

Division of Charts:

Tide reducers are approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 4380

Locality: Pavlof Bay, Entrance, S. W. Alaska.

Chief of Party: R. R. Lukens in 1924.
Plane of reference is mean lower low water
5.6 ft. on tide staff at Kings Cove, Alaska.

For reduction of soundings, condition of records satisfactory
except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginnng of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered wrong column.
7. Field reductions entered in "Office"column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tubeused not stated.
11. Sounding tube No. entered in column of"Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks

G Parr

Chief, Division of Tides and Currents.

Section of Field Records. January 30, 1925.

~~Division of Hydrography and Topography~~

Division of Charts:

Tide reducers are approved in volumes of sounding records for

HYDROGRAPHIC SHEET 4380

Locality: Pavlof Bay Entrance, S. W. Alaska

Chief of Party: R.R.Lukens in 1924
Plane of reference is mean lower low water
ft. on tide staff at

See remarks below.

For reduction of soundings, condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered wrong column.
7. Field reductions entered in "Office"column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tubeused not stated.
11. Sounding tube No. entered in column of"Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks: The work on "Q" day, Sept. 26, 1924, was reduced from tide curve drawn from data in Pacific Coast Tide Tables, 1924. Standard Port, Kodiak, Subordinate Port Dolgoi Harbor.

G T Rude

Chief, Division of Tides and Currents.

Report on Verifying and Inking H. 4380

The field drafting, protracting and plotting of soundings were excellent.

The records in general were very good. Additional bottom characteristics should have been noted, however. The field party had failed to reduce the wire soundings in vertical casts and the verifier had to reduce them.

The shoal sounding about a mile NNW of AKOL should be developed.

There are relatively some shoal soundings which should be either checked or developed, namely :-

50	fms	lat.	55° 16.'3	long.	161° 45.'2
50	"	"	55° 19.'0	"	161° 41.'7
51	"	"	55° 16.'6	"	161° 43.'0

The area above 55°20' will some day require a more detailed survey to adequately show the broken character of the bottom. The half dozen or so shoals found on this sheet above 55°20' merely point the way to some which are probably as yet undiscovered.

What may be expected is shown by Black Rock which is about 15 feet high yet within a few hundred meters of it soundings of 23 to 50 fathoms were obtained, the former sounding being the shoalest in this vicinity.

F. M. Albert Draftsman,
Section of Field Records

March 19, 1925.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND REFER TO No. 4-DRM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON March 23, 1925.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4380

Entrance to Pavlof Bay, Alaska Peninsula

Surveyed in 1924

Instructions dated February 27, 1923 and February 8, 1924

Chief of Party, R. R. Lukens.

Surveyed by R. R. Lukens, O. S. Reading and C. J. Itter, Jr.

Protracted and soundings plotted by C. Pierce.

Verified and inked by F. M. Albert.

1. The records conform to the requirements of the General Instructions except that there should have been more bottom characteristics noted. In three days of development work by the launch no bottoms were given.

   The leadline soundings made by the ship were not reduced.

2. The plan and character of development conform to the requirements of the General Instructions.

3. The plan and extent of development satisfy the specific instructions.

4. The sounding line crossings are adequate considering the uneven character of the bottom.

5. The information is sufficient for drawing the usual depth curves.

6. The usual field plotting was done by the field party. It was accurately done but, owing to the failure to reduce the wire soundings obtained by the ship, none of them were plotted.

7. The character of the junctions with the adjoining sheets cannot be stated as they have not yet been plotted.

8. As the bottom is very uneven in places additional development is desirable on some of the shoaler spots. Throughout a considerable portion of the area of the sheet dragging is needed.

9. The character and scope of the surveying is ~~good~~ very good and the field drafting is fair.

10. Reviewed by E. P. Ellis, March, 1925

Approved -
H.B.
J.H.H.

GPO

4380

Form 567
11—812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. (G) 4380

State .Southwest Alaska,. . . . . .

General locality .Alaska Peninsula. . . . . .

Locality ~~Pavlof Bay~~ Entrance to Pavlof Bay . . . . . .

Chief of party .R. R. Lukens . . . . . .

Surveyed by R. R. Lukens., O.S. Reading & C.A. Ittner . . . . . .

Date of survey .Season 1924. . . . . .

Scale .1:40,000 . . . . . .

Soundings in Fathoms. . . . . .

Plane of reference .Mean Lower Low Water. . . . . .

Protracted by C. Pierce . Soundings in pencil by C. Pierce.

Inked by . . F. Albert . . . Verified by F. Albert . . . . . .

Records accompanying sheet (check those forwarded):

Des. report, ... Tide books, ... Marigrams, ...2... Boat sheets,

...8... Sounding books, ... Wire-drag books, ... Photographs.

Data from other sources affecting sheet, . . Pressure Tube Correction Graphs.

Remarks: Field Sheet G.